

**REMARKS/ARGUMENTS**

Claims 1-11 are pending. Claims 1-10 have been rejected. New Claim 11 has been added.

**Claim Rejections 35 U.S.C. § 103(a)**

Claims 1-10 are rejected under 35 U.S.C. § 103(a) as being obvious over WO00/37579 to Arata et al. ("Arata '579") in view of Great Britain Patent No. 2 362 037 to Ongkosit ("Ongkosit '037") and further in view of Japanese Patent No. 2000-154232 to Ekusa et al ("Ekusa '232").

In forming the rejection of independent Claim 1, the Examiner relies on Arata '579 as disclosing the halogenated epoxy resin, phenol novalac resin, and curing accelerator of independent Claim 1. Additionally, the Examiner indicates, and Applicants respectfully agree, that Arata '579 fails to disclose any of the additional limitations called for in amended independent Claim 1. Thus, in order to form the rejection of independent Claim 1, the Examiner relies on Ekusa '232 and Ongkosit '037 for this disclosure. Specifically, the Examiner indicates that Ongkosit '037, discloses an epoxy, DER530A80, that is a brominated epoxy resin having an epoxy equivalent of 427g/eq, an n=0 component of 28%, and a bromine content of 23%.

In forming the rejection under 35 U.S.C. § 103(a), the Examiner must identify in an Office Action a rational basis why a person of ordinary skill in the art would have combined or modified the prior art elements in the manner claimed. *See KSR Int'l Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007) (a patent examiner must provide "an apparent reason to combine the known elements in the fashion claimed by the patent at issue. To facilitate this review, this analysis should be made explicit."); *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (cited with approval in *KSR*) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.") It is not sufficient to merely show that an epoxy meeting the limitations of amended Claim 1 is known in the art. The obviousness analysis is not complete until an explanation is provided as to why one having ordinary skill in the art would have been led to use the epoxy in combination with the teachings of Arata '579. *Ex Parte Girouard et al*, Appeal No. 2007-3307 (Bd. Pat. App. & Int. 2008).

The basis upon which a person of ordinary skill in the art would have combined or modified the prior art in the manner claimed is indicated by the Examiner to be to achieve more desirable properties, such as "reduced board warpage and delamination". See Office Action dated July 22, 2008, page 4. However, contrary to the Examiner's suggestion, a person of ordinary skill in the art would not combine the epoxy disclosed in Ongkosit '037 with the resin composition of Arata '579 to achieve this result, as Ongkosit '037 clearly indicates that the benefits of "reduced board warpage and delamination" are not dependent on the particular epoxy resin used. Specifically, the entire disclosure of Ongkosit '037 is directed to creating a multi-layer circuit board that overcomes the problems of board warpage and delamination, neither of which are resin specific. In fact, Ongkosit '037 states in the second paragraph of page 3 that, "No particular types or brands of resins are disclosed as relied upon in the following paragraphs since *the various aspects of the present invention are not concerned with, or limited to, particular types of resin*" (emphasis added). In contrast, it is the method of manufacturing a multi-layered circuit board disclosed in Ongkosit '037 that provides the reduction in board warpage and delamination.

Thus, the benefits of reduced board warpage and delamination that are cited by the Examiner as the reason that a person of ordinary skill in the art would combine the teachings of Ongkosit '037 with the teachings of Arata '579 would not be expected to be achieved by simply utilizing the resin disclosed in Ongkosit '037 in conjunction with the teachings of Arata '579. As a result, the Examiner fails to provide any articulated reasoning with a rational underpinning to support the legal conclusion of obviousness. See *KSR*, 127 S.Ct. at 1740-41 (requiring an explicit analysis when a conclusion of obviousness is based on interrelated teachings of multiple patents, the effects of demands known to the design community are present in the marketplace, and the background knowledge possessed by a person having ordinary skill in the art).

Thus, for at least the foregoing reasons, Applicants respectfully submit that independent Claim 1, as well as Claims 2-10 which depend therefrom, are not obvious over Arata '579 in view of Ekusa '232 and further in view of Ongkosit '037.

Application Serial No. 10/559,556  
Amendment dated October 23, 2008  
Reply to Office Action dated July 22, 2008

**Conclusion**

It is believed that the above represents a complete response to the Official Action and reconsideration is requested. Specifically, Applicants respectfully submit that the application is in condition for allowance and respectfully requests allowance thereof.

In the event Applicants have overlooked the need for an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby petition therefor and authorize that any charges be made to Deposit Account No. 02-0385, Baker & Daniels.

Should the Examiner have any further questions regarding any of the foregoing, he is respectfully invited to telephone the undersigned at 260-424-8000.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on: October 23, 2008

MATTHEW B. SKAGGS, REG. NO. 55,814

Name of Registered Representative

  
Signature

October 23, 2008

Date